families still preserving some use of the Green Corn Medicine.

From the collection of data here presented it appears that the Cherokee in aboriginal times celebrated a major community festival when the green corn first became mature enough to eat; this festival persisted, probably in an abbreviated form as late as 1887. Portions of this ritual became separated from the obsolescent Green Corn Festival and at present are found as two separate survivals, a Green Corn Feast held for curative purposes whenever it may be required and a Green Corn Medicine, which is prepared in the separate households of the more conservative Cherokee and administered to all members of the family as a prerequisite to eating the green corn. Continued adherence to this medicine ritual indicates the strong conservatism of a certain minority of "full-blood" Cherokee households.

BOTANY.—*Mosses of El Salvador.*[1] WILLIAM C. STEERE, University of Michigan, and DOROTHY E. CHAPMAN, Office of Foreign Agricultural Relations. (Communicated by E. H. WALKER.)

The moss flora of one Central American republic, El Salvador, has remained almost completely unknown up to the present time, even though the mosses of neighboring countries have been rather extensively collected and studied. Our knowledge of the mosses of El Salvador has been confined until now to a list of 11 species included in a catalogue of the plants of the republic.[2] These 11 species are *Erythrodontium squarrosum, Fabronia flavinervis, Funaria calvescens, Orthostichidium excavatum, Pilotrichella viridis, Porotrichum cobanense, Leptodontium sulphureum, Mittenothamnium diminutivum, Papillaria nigrescens, Pireella pohli,* and *Polytrichum angustifolium,* of which only the first six are duplicated in the collections of Chapman and Kovar reported upon here. The fact that these recent larger collections have not duplicated completely all species of earlier collections demonstrates conclusively the need for further bryological explorations in El Salvador, especially since many species common elsewhere in Central America are not represented in these collections. El Salvador is so nearly a blank on the bryological map that it is necessary to report as new to its flora such common and widely distributed mosses as *Fissidens kegelianus, Trematodon longicollis, Octoblepharum albidum, Anoectangium euchloron, Bryum argenteum, Pohlia cruegeri, Philonotis glaucescens, P. gracillima,* and *Sematophyllum caespitosum.* One may still wonder why several other ubiquitous species as *Macromitrium mucronifolium, Taxithelium planum, Hyophila tortula, Rhacopilum tomentosum, Neckeropsis disticha,* and *N. undulata* have apparently still not been collected in El Salvador.

As a consequence of the lack of information concerning the mosses of El Salvador, it seems thoroughly worth while to give rather full data pertaining to the stations from which the present collections came. The following geographical and geological data on the collecting stations are based on information furnished by Dr. Anton Kovar, botanist at the Centro Agrónomo de El Salvador:

COLLECTING STATIONS OF DOROTHY E. CHAPMAN

Station A. La Ceiba, 6 km west of San Salvador, is at an altitude of 2,279 feet above sea level. It is near the upper limit of the Lower Arid Tropical Zone, where the temperature and relative humidity are comparatively high and uniform throughout the entire year, regardless of the season. The mean annual humidity is 75 percent, dropping in the dry season to ±70 percent and rising in the rainy season to 87 percent. The mean annual temperature is 74°F., with a maximum of about 90°F. and a minimum of 60°F. A year's average rainfall, based on recordings taken over a 12-year period, is ±64 inches. The soil is well-drained

[1] Contribution from the Department of Botany and the Herbarium of the University of Michigan. Received April 11, 1946.

[2] Standley, P. C., y S. Calderón. *Lista preliminar de las plantas de El Salvador* (Musci, pp. 18–19). San Salvador, 1925; ed. 2, 1941.

volcanic pumice. The mosses were collected on July 25, 1945, along the edges of the driveways and flower beds of the Experimental Station on otherwise bare soil, except for a few growing on living trees.

Station B. Santa Tecla, 12 km west of San Salvador, is at an altitude of 2,842 feet. It is near the lower limit of the Upper Arid Tropical Zone. Because of its peculiar location between the San Salvador Volcano and the Pacific coastal mountain range, this site is more humid than are other parts of the same zone, and it rains here more than in many other sections of the country. The maximum temperature averages 75–80°F., with a minimum of ±45°F. The mosses were collected on July 24, 1945, along the driveways, roads, and fields of the Centro Agrónomo de El Salvador and its immediate vicinity. The soil here consists of a top black soil layer of variable thickness, with volcanic ash beneath it, and underlying these a thin layer of talpetate (cemented and impermeable volcanic ash); then old lava flows underneath all.

Station C. The rim of the crater of the San Salvador Volcano is at an altitude of 6,132 feet. Although it is still in the Upper Arid Tropical Zone, a high degree of humidity is present in the form of dew carried by the winds from the Caribbean coast. Even during the driest season of the year, the soil and vegetation are often covered with droplets of condensed water vapor. No specific data are available as to the rainfall, relative humidity, or temperature. The soil is talpetate. The mosses were collected July 28, 1945, along the path on the crater rim among heavy herbaceous growth.

Station D. The automobile road from Santa Tecla, up the San Salvador Volcano at an altitude of 4,225 feet, is in the middle of the Upper Arid Tropical Zone. No data are available on the humidity and temperature, although both are probably lower than at Santa Tecla. However, at this particular site a mist often occurs, even at the beginning of the dry season. The soil is composed of volcanic ashes. The mosses were collected on July 28, 1945, along the steeply cut banks of the road on soil and on tree trunks.

COLLECTING STATIONS OF DR. ANTON KOVAR

The three localities, El Pilón de los Naranjos, El Jardín, and Cerro del Manzano, are in the western part of El Salvador. The west of El Salvador is in general somewhat higher than the east, and there is more of the original vegetation left. No rainfall data are available, but it can be said that the average annual rainfall is somewhat higher than in San Salvador. In San Salvador it is about 71 inches; in the region where these specimens were collected, especially at the higher altitudes, it is not below 80 inches. No temperature data are available. Judging from similar situations on the volcano of San Salvador and from personal observations, Dr. Kovar estimates that the temperature varies from 5 C. as a minimum to 25°C. as a maximum. The soils are of volcanic origin, and more or less disintegrated, especially at El Jardín and El Manzano. El Cerro del Pilón seems of more recent origin, although it is decidedly older than the volcano of San Salvador.

Cerro del Manzano (January 14, 1946). The site is at about 5,200 feet altitude. The forest shows clear signs of transition between the Upper Dry Tropical Zone and the Humid Upper Tropical Zone (cloud forest). The locality has a northern exposure.

El Jardín (December 27, 1945; January 15, 1946). At 6,500 feet altitude, this station lies wholly within the Upper Humid Tropical Zone. It is a ridge about a mile and a half long running from west to east. The locality is on the northern slope.

El Cerro del Pilón (January 16, 1946). At an altitude of 6,500 feet and south of El Jardín, which protects it against the humid northern winds from the Atlantic coast. The vegetation is decidedly xerophytic. There is a marked difference between the northern and southern slopes of the central volcanic chain. Although this chain is much nearer to the Pacific Ocean, given the prevailing northern winds the northern slopes from 5,000 feet and up receive more moisture than the southern slopes. Therefore the northern slope has a cloud forest whereas the southern slope at the same altitude has xerophytic vegetation. Yet as one goes from west to east the Humid Upper Tropical Zone is less marked. While it is very noticeable on the volcano of Santa Ana, it is somewhat less so on the volcano of San Salvador. On the volcano of San Vicente it can be noticed only on a small area near the top. San Miguel Volcano does not show it at all; probably the mountain chains in Honduras stop all the moisture.

In El Salvador the rainy season in all zones starts during the month of May and ends the latter part of October. During this period storms may be of great violence with an extremely heavy rainfall. Throughout the dry season, which lasts from November to April, there are occasional rains, usually in early November and early January.

In the following list it is interesting to note that the mosses from the Upper and Lower Arid Tropical Zones, such as *Aloinella catenula*, *Barbula bescherellei*, and *Globulina globifera*, are most closely related to those of dry uplands in Mexico and Guatemala, whereas the mosses from the cloud forests of the Humid Upper Tropical Zone, as *Rigodium gracile*, *Atrichum oerstedianum*, and *Squamidium leucotrichum*, are most closely related floristically to those of Costa Rica, the West Indies, and northern South America.

FISSIDENTACEAE

Fissidens kegelianus C. Müll. On soil, La Ceiba, *Chapman A-6;* on soil, Santa Tecla, *Chapman B-21.*

Distribution: Not uncommon at lower altitudes throughout tropical America.

Fissidens repandus Wils. ex Mitt. On soil, Santa Tecla, *Chapman B-19;* on soil, summit of Volcan San Salvador, *Chapman C-2;* on soil, road up Volcano San Salvador from Santa Tecla, *Chapman D-3;* on soil, El Jardín, December 27, 1945, *Kovar 6a.*

Distribution: Florida; Mexico; West Indies; northern South America. The type locality is near Quito, Ecuador, and not Mexico, as stated by Grout (North American Flora **15**: 176. 1943).

Fissidens vardei Thér. On rotten wood, Cerro del Manzano, *Kovar 18a.*

Distribution: Greater Antilles; Guatemala.

DITRICHACEAE

Trematodon longicollis Michx. On soil, Cerro del Manzano, *Kovar 9, 14b, 17b.*

Distribution: Cosmopolitan throughout the warmer climates of the world.

DICRANACEAE

Campylopus filifolius (Hornsch.) Mitt. El Jardín, December 27, 1945, *Kovar 3.*

Distribution: Central America; Brazil.

LEUCOBRYACEAE

Octoblepharum albidum Hedw. On bamboo roots, Montserrate, near La Ceiba, 800 meters alt., January 11, 1946, *Kovar 8.*

Distribution: Throughout tropical and subtropical climates of the whole world.

POTTIACEAE

Aloinella catenula Card. On soil, Santa Tecla, *Chapman B-7.*

Distribution: Mexico; Guatemala.

Anoectangium euchloron (Schwaegr.) Mitt. On earth, Santa Tecla, *Chapman B-12;* Cerro del Manzano, *Kovar 15.*

Distribution: Southern United States; throughout tropical and subtropical America; Asia.

Barbula bescherellei Sauerb. On soil, Santa Tecla, *Chapman B-17;* summit of Volcano San Salvador, *Chapman C-6;* road up Volcano San Salvador from Santa Tecla, *Chapman D-1.*

Distribution: Southern United States; Mexico; Guatemala.

Globulinella Steere gen. nov. (*Globulina* C. Müll., 1897, nec *Globulina* Spegaz., 1889).

Globulinella globifera (Hampe) Steere n. comb. (*Seligeria globifera* Hampe, Bot. Zeit. **28**: 49. 1870; *Trichostomum obtusifolium* Hampe, *ibid.* **28**: 49. 1870; *Globulina globifera* C. Müll., Nuov. Giorn. Bot. Ital. n.s. **4**: 39. 1897, Broth. in E. & P., Nat. Pflanzenfam. **1**(3): 404. 1902; *Gyroweisia obtusifolia* Broth., *ibid.* **1**(3): 389. 1902.) On soil, Santa Tecla, *Chapman B-4.*

Distribution: Mexico; Honduras.

Globulinella globifera, based on *Seligeria globifera* Hampe, is a clear-cut, unmistakable species that has been collected only a few times since its original discovery. Immediately preceding the description of *S. globifera* is the diagnosis of another proposed new species, *Trichostomum obtusifolium* Hampe, which was later transferred to *Gyroweisia* by Brotherus (1902). In reading the original descriptions of these two new species, which grew intermixed in the same type collection, one cannot help being impressed by their great similarity. Parallel phrases from the original descriptions are compared below:

Trichostomum obtusifolium	*Seligeria globifera*
"Dioicum, . . . saturate viride, gregarie.	"Dioica?, . . . gregaria, lutescente viridis, infra fuscata.
Caulis brevissimus paucifolius	Caulis brevissimus erectus, conglobatus.
Folia margine erecto concava, inferiora minora, obtuse ovata, . . . sicca involuto-conglobata, integerrima humida subcucullato-concava. . . .	Folia in globulos convoluta, ovalia, subcucullato-concava, obtusissima, integerrima . . .
Nervo lutescente apice evanido	. . . Nervo crasso lutescente apice abrupto
Cellulis basilaribus subquadratis hyalinis, caeteris dense aggregatis minimis granulosis, griseo-viridi opacis.	Cellulis basilaribus subquadratis laevioribus, pellucidis, in superiori parte folii dense aggregatis, minoribus, lucide granulatis.
Folium perichaetiale unicum convolutum.	(Folia) perichaetialia convoluta, longiora, erecta
Seta gracillima erecta (4–6''') e flavo demum rubens	Seta gracillima 4–6 linearis flavide rubens
Theca erecta angusta, parce oblique elliptico-cylindrica	Theca oblongo-cylindrica, annulata
Peristomium annulo hyalino circumdatum, intense rubrum, dentibus profunde bifidis, cruribus subulatis rugulosis	Peristomii dentibus brevibus subulatis, torulosis rubris.
Operculo brevi conico-rostrato Calyptra angusta fuscata"	Operculo conico-subulato Calyptra angusta, demum fuscata"

An analysis of the above comparison shows more similarities than differences. The only serious distinction between the two species seems to be in peristome structure, since it is implied that the *Seligeria* has 16 undivided teeth, an important generic character. However, Brotherus (1902, fig. 260) illustrated and described *Globulina globifera* with the teeth divided in the manner of many genera of the Pottiaceae, undoubtedly on the basis of authentic material. Hampe, himself, in comparing the two species, offers the following note concerning his *Seligeria globifera:* "Ex habitu *Trichostomi obtusifolii,* cum eo commixtum lecta; colore lutescente viridi aliena, inter Seligerias ob thecam cylindricam singularis." Most mosses differ to some extent in color between new and old growth, and this color difference is especially conspicuous in the Pottiaceae, where the new leaves are usually a bright yellowish or bluish green and the old leaves a dark green, red, or brown to black. It is probable that the specimen seen by Hampe contained plants of several seasons, showing the color differences he stresses. Furthermore, several Mexican specimens named *Gyroweisia obtusifolia* by Cardot and Thériot are clearly *Globulina globifera.* For additional evidence of the close relationship of these two species, the opinion of Andrews[3] may be cited. In speaking of the genus *Gyroweisia,* he says: "*G. obtusifolia* (Hpe.) Broth. from Mexico is a plant in many ways suggesting relationship with the Mexican species of the genus *Globulina* C. M." Another similar opinion is that of Müller,[4] who says: "Das niedliche Pflänzchen, welches diesen Typus begründet, nämlich Seligeria globifera Hpe., welche Strebel in den 60er Jahren an Kalkfelsen bei Veracruz in Mexico sammelte, hat ganz die Tracht eines kleinen Trichostomum, etwa des T. obtusifolium Hpe., mit welchem es zusammen wächst."

Consequently, there seems to be no valid excuse for keeping separate Hampe's two species based on one type collection, and it is therefore proposed to put the less well known *Trichostomum obtusifolium* into the synonymy of *Seligeria globifera,* although the strictest interpretation of priority of place might indicate the opposite procedure.

Since *Globulina boliviana* has been transferred to *Barbula* by Hilpert,[5] after a careful study, the only other species which belongs here is *Globulinella peruviana* (R. S. Williams) Steere n. comb. (*Globulina peruviana* R. S. Williams, Bull. Torrey Bot. Club **43**: 325. *pl. 17, f. 8–15.* 1916).

Rhamphidium macrostegium (Sull.) Mitt. On rock, Cerro del Pilón, *Kovar 28a.*

Distribution: West Indies; Mexico, Costa Rica; South America.

[3] Andrews, A. L. *The status of* Gyroweisia *in North America.* Bryol. **25**: 97–100. 1922.

[4] Müller, C. *Genera muscorum frondosorum,* vi+474 pp. Leipzig, 1901.

[5] Hilpert, F. *Studien zur Systematik der Trichostomaceen.* Bot. Centralbl. **50**(2): 585–706. 1933.

Tortula caroliniana Andrews. On tree, summit of Volcano San Salvador, around crater, *Chapman C-4.*

Distribution: Southern United States; Mexico; Guatemala, Costa Rica.

FUNARIACEAE

Funaria calvescens Schwaegr. On soil, La Ceiba, *Chapman A-2;* on soil, Santa Tecla, *Chapman B-1;* on soil, road up Volcano San Salvador from Santa Tecla, *Chapman D-6;* Cerro del Manzano, *Kovar 14, 17.*

Distribution: El Salvador; throughout all tropical and subtropical regions of the world.

SPLACHNACEAE

Splachnobryum bernoullii C. Müll. On soil, La Ceiba, *Chapman A-1;* on soil, Santa Tecla, *Chapman B-5.*

Distribution: Guatemala, Honduras; Mexico.

BRYACEAE

Anomobryum semiovatum (Brid.) Jaeg. On soil, Santa Tecla, *Chapman B-6.*

Distribution: Costa Rica; South America.

Brachymenium capillare Schimp. On soil, summit of Volcano San Salvador, *Chapman C-5* (a juvenile state).

Distribution: Mexico; Costa Rica.

Bryum andicola Hook. On roots, summit of Volcano San Salvador, around crater, *Chapman C-3;* on rotten wood, El Jardín, December 27, 1945, *Kovar 5a,* on humus, *Kovar 6.*

Distribution: Mexico; Honduras, Costa Rica; West Indies; South America.

Bryum argenteum Hedw. On soil, La Ceiba, *Chapman A-4;* on soil, Santa Tecla, *Chapman B-2;* on soil, summit of Volcano San Salvador, around crater, *Chapman C-1* (var. *lanatum*); on soil, road up Volcano San Salvador from Santa Tecla, *Chapman D-5;* Cerro del Manzano, *Kovar 9a, 14a, 17a.*

Distribution: A weedy species truly cosmopolitan in all parts of the world.

Epipterygium immarginatum Mitt. On soil, Santa Tecla, *Chapman B-3.*

Distribution: Guatemala.

Pohlia Cruegeri (Hampe) Andrews. On earth, Santa Tecla, *Chapman B-8.*

Distribution: Southern United States; widespread in tropical America.

Pohlia papillosa (C. Müll.) Steere n. comb. (*Bryum papillosum* C. Müll., Syn. 1: 326. 1849.) On soil, Cerro del Pilón, *Kovar 28.*

Distribution: West Indies; Costa Rica; northern South America.

BARTRAMIACEAE

Philonotis glaucescens (Hornsch.) Paris. On soil, Santa Tecla, *Chapman B-16.*

Distribution: Southern United States; widespread in tropical America.

Philonotis gracillima Aongstr. On soil, La Ceiba, *Chapman A-3;* on earth, Santa Tecla, *Chapman B-15.*

Distribution: Widespread in tropical and subtropical America, usually at lower altitudes.

Philonotis sphaericarpa (Hedw.) Brid. On soil, summit of Volcano San Salvador, around crater, *Chapman C-7.*

Distribution: Florida; West Indies; Mexico; Central and South America; usually at higher altitudes.

PRIONODONTACEAE

Prionodon densus (Hedw.) C. Müll. On tree, El Jardín, December 27, 1945, *Kovar 4a;* January 15, 1946, *Kovar 20;* on tree, Cerro del Pilón, *Kovar 31.*

Distribution: West Indies; Mexico; Central and South America.

PTEROBRYACEAE

Orthostichidium pentagonum (Hampe) C. Müll. On tree, Cerro del Pilón, *Kovar 30.*

Distribution: Mexico; British Honduras, Costa Rica; South America. The report of *Orthostichidium excavatum* from Cerro del Guayabal, El Salvador, by Standley and Calderón should undoubtedly be referred here.

METEORIACEAE

Meteoriopsis patula (Hedw.) Broth. On branch, Cerro del Manzano, *Kovar 11;* epiphytic, El Jardín, January 15, 1946, *Kovar 23.*

Distribution: Very widespread in tropical and subtropical America.

Pilotrichella flexilis (Hedw.) Jaeg. Epiphytic, El Jardín, January 15, 1946, *Kovar 19;* epiphytic, Cerro del Pilón, *Kovar 29.*

Distribution: West Indies; Mexico; Central and South America.

Pilotrichella rigida (C. Müll.) Besch. Epiphytic, Cerro del Pilón, *Kovar 35.*

Distribution: Mexico; Guatemala, Costa Rica; Honduras. The report of *Pilotrichella viridis* from Ahuachapán, El Salvador, by Standley and Calderón, almost certainly refers to this species.

Squamidium leucotrichum (Tayl.) Broth. On twig of cypress, Cerro del Manzano, *Kovar 11a;* on small branch, El Jardín, January 15, 1946, *Kovar 22.*

Distribution: West Indies; Costa Rica; South America.

PHYLLOGONIACEAE

Phyllogonium fulgens (Hedw.) Brid. On tree, El Jardín, December 27, 1945, *Kovar 4.*

Distribution: West Indies; Central and South America.

NECKERACEAE

Homalia glabella (Hedw.) Mitt. On rock, Cerro del Pilón, *Kovar 33.*

Distribution: West Indies; Mexico; British Honduras, Honduras, Costa Rica; northern South America.

Neckera urnigera C. Müll. On tree, Cerro del Pilón, *Kovar 30a.*

Distribution: Mexico.

Porotrichum cobanense C. Müll. On rock, El Jardín, December 27, 1945, *Kovar 2a;* on tree, Cerro del Manzano, *Kovar 10, 18b;* on rock, Cerro del Pilón, *Kovar 26;* epiphytic, *Kovar 37;* on rock, *Kovar 38.*

Distribution: El Salvador, Guatemala, British Honduras, Costa Rica, Panama.

LEMBOPHYLLACEAE

Rigodium gracile Ren. & Card. Epiphytic, Cerro del Pilón, *Kovar 34a.*

Distribution: Costa Rica.

HOOKERIACEAE

Lepidopilum haplociliatum (C. Müll.) Paris. On twig, El Jardín, December 27, 1945, *Kovar 1.*

Distribution: Guatemala, Costa Rica.

FABRONIACEAE

Fabronia flavinervis C. Müll. On wood, La Ceiba, *Chapman A-5;* on tree, Santa Tecla, *Chapman B-10;* on roadside tree, road up Volcano San Salvador from Santa Tecla, *Chapman D-7.*

Distribution: El Salvador, Guatemala, Honduras, Costa Rica; Mexico.

BRACHYTHECIACEAE

Brachythecium stereopoma Spruce. On soil, summit of Volcano San Salvador, around crater, *Chapman C-9.*

Distribution: West Indies; Costa Rica; South America.

ENTODONTACEAE

Erythrodontium densum (Hook.) Paris. On wood, Santa Tecla, *Chapman B-11.*

Distribution: Mexico; Costa Rica; South America.

Erythrodontium squarrosum (C. Müll.) Paris. On tree, Santa Tecla, *Chapman B-9;* on tree, road up Volcano San Salvador from Santa Tecla, *Chapman D-2.*

Distribution: El Salvador, Costa Rica; South America.

PLAGIOTHECIACEAE

Stereophyllum mexicanum R. S. Williams. On wood, Santa Tecla, *Chapman B-14.*

Distribution: Mexico.

SEMATOPHYLLACEAE

Sematophyllum caespitosum (Hedw.) Mitt. On wood, Santa Tecla, *Chapman B-13;* on twig, El Jardín, December 27, 1945, *Kovar 2.*

Distribution: Widely distributed through the tropics and subtropics of the whole world.

HYPNACEAE

Microthamnium lehmanii Besch. On dead wood, Cerro del Manzano, *Kovar 12, 18;* epiphytic, Cerro del Pilón, *Kovar 29.*

Distribution: Costa Rica.

Microthamnium reptans (Hedw.) Mitt. On rotten wood, El Jardín, December 27, 1945, *Kovar 5;* epiphytic, Cerro del Pilón, *Kovar 34.*

Distribution: Very widespread in tropical America.

POLYTRICHACEAE

Atrichum oerstedianum (C. Müll.) Mitt. On soil, El Jardín, December 27, 1945, *Kovar 7;* on soil, Cerro del Pilón, *Kovar 36.*

Distribution: Costa Rica, Honduras.

Pogonatum liebmannianum Schimp. On soil, Cerro del Manzano, *Kovar 13*.

Distribution: Mexico; Costa Rica.

Polytrichum juniperinum Hedw. On soil, Cerro del Pilón, *Kovar 25*.

Distribution: In temperate and cold climates of the whole world.

BOTANY.—*A new species of* Sphaceloma *causing scab of plantain* (Plantago).[1]

ANNA E. JENKINS, Bureau of Plant Industry, Soils, and Agricultural Engineering, and A. A. BITANCOURT, Instituto Biologico, São Paulo, Brazil.

In 1938 a specimen of *Sphaceloma* on plantain (*Plantago formosana*), which he had collected at Taihoku, Formosa, on May 16, 1928, was sent to the senior writer by K. Sawada of the Taihoku Imperial University. The specimen showed abundant leaf and peduncle spotting (Fig. 1, I). In 1939, the writers found the same type of spotting on plantain (*P. rugelii*) in Washington, D. C., near the entrance to the Smithsonian Institution Building and on the grounds of the Washington Monument. Subsequently they collected specimens of the same fungus in New Jersey, Michigan, Indiana, and Illinois. The record of the fungus in Indiana previously made (*5*) is based on the collection in Indiana, here illustrated (Fig. 1, A–H and J–M).

These several collections, together with others now available, reveal that this fungus is widespread in eastern United States. It was extremely abundant in the District of Columbia area during the summer and autumn of 1940, when it was isolated in pure culture (Fig. 1, N). Mature inflorescences of the *Plantago* showed that it was *P. rugelii*. Unfortunately, because of the lack of mature inflorescences, it has not been possible among some of the other specimens available to determine whether the host species is *P. rugelii* or *P. major*. Two early specimens examined, hitherto unidentified, are from Still Pond, Md., October 10, 1891, E. F. Smith, and Arlington, Conn., October 27, 1900, G. P. Clinton. In the former case the leaves were collected because of the presence of *Erysiphe cichoracearum* DC. on them, but the *Sphaceloma* (*6*) spot also is abundant. The label of this specimen does not bear the collector's name. The handwriting, however, may be distinguished as that of Dr. Erwin F. Smith, who was studying peach yellows at Still Pond at this time. His bulletin on the subject (*10*) refers to a visit to Still Pond as late as July 24, 1891 (*loc. cit.*, foot note p. 43); that of October 10 doubtless was too late for similar record.

Since this pathological condition and the pathogen have not been accorded recognition as taxonomic entities, the disease is here termed "scab of plantain," and the fungus is proposed as a new species.

Sphaceloma plantaginis, sp. nov.

Spots on leaves and scapes, including bracts and calyx, few to numerous, scattered, although may be more abundant on lower part of leaves and peduncles; on leaves diaphyllous, usually more prominent above, circular to subcircular, minute to 1.5 mm in diameter, coalescent, usually in small groups, often with raised margins, either hyperplastic or necrotic, or hyperplastic in outer area and necrotic in central pale area, necrotic tissue collapsed, often reduced to the imperfectly formed upper and lower epidermis, papery and translucent except for veins, which remain after the other tissue has become lacerated and dropped away; on scapes circular to elliptical, occasionally elongate, on peduncle often depressed, minute 1–1.5, rarely 2 mm in diameter, at first water-soaked in appearance, occasionally "neutral red"[2] usually (on dry specimen) "deep vinaceous" to "russet vinaceous," sometimes "pale grayish vinaceous,"central area or occasionally entire spot paling to dirty white or white; hyphae subcuticular, becoming intraepidermal, disrupting the epidermis, forming a more or less extensive superficial hyaline stroma up to 15μ thick, this sometimes extending below the epidermis, as a loose prosenchyma, or forming a naked hyaline stroma projecting hori-

[1] Received March 22, 1946.

[2] Colors in quotation marks are based on Ridgway (*9*).